

AMRITA GHOSH

MECHANICAL ENGINEER

CONTACT

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EDUCATION

- ❖ Iowa State University
Ames, IA,
Graduation-May 2021
BS Mechanical Engineering
Magna cum Laude
Cumulative GPA: 3.77
- ❖ University of Calcutta
Kolkata, India, 2012
BA, Education
- ❖ Jadavpur University
Kolkata, India, 2008
MA, Economics
GPA: 7.45 / 10.00

SKILLS

- ❖ Solidworks CAD
- ❖ MATLAB
- ❖ LabVIEW, ANSYS
- ❖ Microsoft Office
- ❖ Google Suite
- ❖ Minitab
- ❖ WCM Methodologies, Kaizen methodology, Root Cause Analysis, SMED, 5S, 3M, 5W+1H, 5G, 5 WHY
- ❖ Event Organization and Management
- ❖ Data collection and analysis conducting survey for audits/plant certification.
- ❖ Languages: English, Bengali, German, Spanish, Hindi.

OBJECTIVE

To obtain a full-time/Co-op/Internship position in Mechanical Engineering beginning June 2021.

Holder of a Bachelor of Science in Mechanical Engineering with a minor in Entrepreneurship & Innovation and a Masters in Economics. Prepared to contribute abilities to roles of an Engineer in the light or heavy machinery or vehicles industry while further developing acquired skills and gaining real-world experience.

Capable of integrating skills in Mechanical Engineering and Economics in production and manufacturing.

PROFESSIONAL EXPERIENCE

Whirlpool Corporation, Amana, IA – Engineering Co-op

January 2019 – August 2019

Manufacturing and Workplace Organization

- ❖ Supported/Lead Expansion areas in the plant for Workplace Organization for WCM audit and certification.
- ❖ Facilitated day to day activities such as, gathered data, revised and updated SW, OPL, SOP and conducted time studies for the manufacturing process in multiple assembly lines.
- ❖ Prepared, supported/lead Kaizens developed tools to eliminate waste, increased efficiency of labor for line development and achieving the WCM standard.
- ❖ Collected, consolidated and analyzed data for the Cost Deployment pillar to stratify and prioritize the reduction of NVAA.

Quality Control

- ❖ Inspected units for Trial runs and Pre-Pilot runs, collaborating with the QC department.
- ❖ Built teams for problem-solving in relaunch activities, designed layout of the workstation in the assembly lines to solve working range wastes, launched and organized an online Tool Making Form.
- ❖ Troubleshoot machine malfunction problems in production machinery to adhere to Total Quality Management standards in the assembly lines.

Focussed Improvement

- ❖ Collected and consolidated data in PowerPoint slides for the WCM audit, first ever plant data collection for a new data sheet tracking “Root Cause for Kaizen Delays”.
- ❖ Reduced micro-stoppages of machinery and subsequent time-loss by reactive improvisations as a part of the SMED project team in Focused Improvement pillar.

RESEARCH EXPERIENCE

Iowa State University - Undergraduate Research Assistant

1. Project Title: Vibration Analysis to Correct Two Plane Dynamic Shaft Unbalance.(Vermeer sponsored project)

ACCOMPLISHMENTS

- ❖ Iowa State University
Appeared in the College of Engineering Dean's List: Fall 2016, Spring 2017, Spring 2018, Fall 2019, Spring 2020, Fall 2020 and Spring 2021 for 3.5 above GPA.
- ❖ Iowa State University
Vice President of Outreach in Engineering Students Council (ESC), March 2018 – December 2018.
Recruited and presided over the Outreach Committee, scheduled and ran outreach events in conjunction with VP Events, filed required risk-management paperwork.
- ❖ University of Calcutta
Subject Leader in Economics, April 2011- April 2012.
Coordinated and collaborated activities and arranged exhibitions which won accolades for the college.

AFFILIATIONS

- ❖ American Society of Mechanical Engineers (ISU Student Chapter), Member, 2018 to Current.
- ❖ Tau Beta Pi Engineering Honor Society (Alpha Student Chapter), Member, 2018 to Current.
- ❖ Golden Key International Honor Society, Member, 2018 to Current.

ADDITIONAL WORK EXPERIENCE

Lecturer in Economics in the following institutions in India.

- ✚ Deshbandhu College for Girls, September 2014 -June 2016.
- ✚ Seth Soorajmull Jalan Girls College, November 2013 – April 2014.
- ✚ Institute of Education for Women, December 2012 – May 2013.
- ✚ Raffles Millennium International, April 2012 – June 2012.

Duties and Responsibilities

- ✚ Trained students for Bachelor degree programs and teachers for the teacher training program.
- ✚ Proctored and formulated examinations.

February 2020 – May 2020

- ❖ Created and revised MATLAB codes to correct shaft unbalance by assisting Ph.D. students involved in the project.
- ❖ Automated the process of shaft balancing by reducing human intervention to eliminate error in weight calculation through MATLAB code automation.
- ❖ Assisted students in different ways of acquisition and interpretation of vibration data to correct shaft unbalance from a simulated laboratory experiment.
- ❖ Performed literature review on the various methods of two-plane dynamic shaft unbalance.

2. Project Title: Fabrication of Copper Oxide nanostructures for non-enzymatic glucose sensors.

August 2018 – December 2018

- ❖ Conducted experiments to develop varied nanostructures of different morphology through thermal treatment and electrodeposition on copper foil substrate.
- ❖ Performed controlled bio sensing experiments on synthesized CuO nanostructures of varying morphology.
- ❖ Performed experiments to identify which morphology has the strongest influence on bio sensing activity.
- ❖ Characterized samples of CuO by SEM and XRD to record data and correlate bio sensing activity.
- ❖ Prepared reports through literature survey and collected data to coordinate progress with other colleagues.

Jadavpur University - Undergraduate Research

Project Title: Demand for Environmental Quality by Households in Kolkata.

August 2003 – May 2005

- ❖ Collected field data from the households through questionnaires.
- ❖ Organized and evaluated data collected through statistical techniques.
- ❖ Interpreted and analyzed data qualitatively and quantitatively.

VOLUNTEERING AND COMMUNITY SERVICE

- ✚ Assisted in building a house as a part of the organization Habitat for Humanity, Cedar Valley, *Summer 2019.*
Venue: Whirlpool Corporation, Amana.
- ✚ Guest Speaker to give a talk on choosing Mechanical Engineering to undeclared major students, *Fall 2018.*
Venue: Sky is the Limit Learning Community, Iowa State University.
- ✚ Iowa State University Ambassador, *Summer 2018.*
Venue: Education Fair organized by the United States India Education Foundation (USIEF), Kolkata, India.
- ✚ Career Fair Ambassador, *Spring 2018.*
Venue: Iowa State University Spring Career Fair, Ames.
- ✚ Tau Beta Pi tutoring help room tutor, *Spring 2018.*
Venue: Iowa State University, Ames.